# PETROLEUM CHEMISTRY U.S.S.R.

*a translation of*

NEFTEKHIMIYA

*Chief Editor:* P. I. SANIN
*Secretary:* M. P. TETERINA

EDITORIAL BOARD

YE. T. DENISOV, G. D. GAL'PERN, KH. M. MINACHEV, AL. A. PETROV,
L. S. POLAK, YE. A. VIKTOROVA

VOLUME 22

SUBJECT/AUTHOR INDEX

PERGAMON PRESS

OXFORD · NEW YORK
BEIJING · FRANKFURT · SÃO PAULO · SYDNEY · TOKYO · TORONTO

# PETROLEUM CHEMISTRY: U.S.S.R.

This journal is published quarterly by Pergamon Press and contains selected papers translated from *Neftekhimiya* Vol. XXII

Translation Editor: E. V. WHITEHEAD

Translator: P. S. CURTIS

Publishing and Advertising Offices:

Maxwell Pergamon Macmillan plc, Headington Hill Hall, Oxford OX3 0BW, England
Maxwell Pergamon Macmillan Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A.

# AUTHOR INDEX


**Ageyev, A. N.** *See* **Aratskova, A. A., Ageyev, A. N., Anpilogov, Yu. Ye., Alekseyeva, T. V., Lipshtein, A. R., Margulis, M. A.** and **Yashin, Ya. I.** 2, 73

**Alekseyeva, T. V.** *See* **Aratskova, A. A., Ageyev, A. N., Anpilogov, Yu. Ye., Alekseyeva, T. V., Lipshtein, A. R., Margulis, M. A.** and **Yashin, Ya. I.** 2, 73

**Anpilogov, Yu. Ye.** *See* **Aratskova, A. A., Ageyev, A. N., Anpilogov, Yu. Ye., Alekseyeva, T. V., Lipshtein, A. R., Margulis, M. A.** and **Yashin, Ya. I.** 2, 73

**Arakelyan, E. A., Azatyan, N. A., Meskina, M. Ya.** and **Meizus, Z. K.** (dec.): Inhibition of oxidation of hydrocarbons with phenol mixtures of equal inhibiting effect 3, 121

**Aratskova, A. A., Ageyev, A. N., Anpilogov, Yu. Ye., Alekseyeva, T. V., Lipshtein, A. R., Margulis, M. A.** and **Yashin, Ya. I.**: Analysis of higher alkylnaphthalenes by liquid chromatography 2, 73

**Ariko, N. G., Kenigsberg, T. P.** and **Mitskevich, N. I.**: Activity of cobalt, manganese and ruthenium salts in liquid-phase oxidation of *p*-xylene 3, 166

**Aslanov, A. D., Zolotova, N. V., Denisov, Ye. T.** and **Kuliyev, F. A.**: Kinetics of interaction of hydroperoxides with some disulphides 3, 137

**Azatyan, N. A.** *See* **Arakelyan, E. A., Azatyan, N. A., Meskina, M. Ya.** and **Meizus, Z. K.** (dec.) 3, 121

**Bashinova, V. M.** *See* **Grishina, O. N., Potekhina, M. I., Bashinova, V. M.** and **Gol'dfarb, E. I.** 4, 219

**Beiko, O. A., Isakov, M. Yu., Telly, V. Yu.** and **Lopatenko, S. K.**: Composition of nitrogen bases of Dzharkurgan crude oil (South Uzbekistan) 4, 212

**Belanova, Ye. P.** *See* **Ryashentseva, M. A., Belanova, Ye. P.** and **Minachev, Kh. M.** 1, 42

**Belousov, V. M.** *See* **Dats'ko, O. R.** and **Belousov, V. M.** 4, 208

**Belov, G. P.** *See* **Zhukov, V. I., Belov, G. P., Ivolgin, V. Ya.** and **Shestak, N. P.** 3, 150

**Belova, V. N.** *See* **Matkovskii, P. Ye., D'yachkovskii, F. S., Russiyan, L. N., Litvinova, V. D., Belova, V. N., Startseva, G. P.** and **Brikenshtein, Kh.-M. A.** 2, 76

**Bembel', V. M., Plyusnin, A. N.** and **Brodskii, Ye. S.**: Composition of nitrogen compounds separated from distillates of West Siberian oils using $TiCl_4$ 1, 23

**Berenblyum, A. S.** *See* **Kovtun, G. A., Zhukovskaya, G. B., Berenblyum, A. S.** and **Moiseyev, I. I.** 3, 133

**Bitman, G. L.** *See* **Khcheyan, Kh. Ye., Klebanova, F. D., Bitman, G. L., Sobolev, O. B.** and **Sokolova, G. A.** 2, 83

**Blyumberg, E. A.** *See* **Smirnova, A. L., Tavadyan, L. A.** and **Blyumberg, E. A.** 3, 143

**Boboleva, S. P.** *See* **Bulygin, M. G.** and **Boboleva, S. P.** 4, 203

**Bobylev, B. N.** *See* **Sandler, E. A., Kharenko, O. A., Ryabukin, A. V.** and **Bobylev, B. N.** 4, 199

**Brikenshtein, Kh.-M. A.** *See* **Matkovskii, P. Ye., D'yachkovskii, F. S., Russiyan, L. N., Litvinova, V. D., Belova, V. N., Startseva, G. P.** and **Brikenshtein, Kh.-M. A.** 2, 76

**Brodskii, Ye. S.** *See* **Bembel', V. M., Plyusnin, A. N.** and **Brodskii, Ye. S.** 1, 23

**Brodskii, Ye. S.** *See* **Iglamova, N. A., Mazitova, F. N.** and **Brodskii, Ye. S.** 2, 109

**Bulygin, M. G.** and **Boboleva, S. P.**: Liquid-phase oxidation of low-molecular weight olefins 4, 203

Cherches, B. Kh. *See* Yegiazarov, Yu. G., Cherches, B. Kh. and Plevako, L. V. 1, 6
Chervinskii, K. A. *See* Ivanov, A. M. and Chervinskii, K. A. 1, 49
Chetina, O. V., Erivanskaya, L. A. and Lunin, V. V.: Effect of copper on the selectivity of a Zr–Ni–Cu–H system in hydrodemethylation of toluene 1, 30

Dats'ko, O. R. and Belousov, V. M.: Direct synthesis of glycerol ethers by oxidation of allyl alcohol and its esters with atmospheric oxygen 4, 208
Davidova, P. and Kovacheva, P.: Special features of thiophen conversion on zeolite catalysts containing transition metals 1, 18
Denisov, Ye. T. *See* Aslanov, A. D., Zolotova, N. V., Denisov, Ye. T. and Kuliyev, F. A. 3, 137
D'yachkovskii, F. S. *See* Matkovskii, P. Ye., D'yachkovskii, F. S., Russiyan, L. N., Litvinova, V. D., Belova, V, N., Startseva, G. P. and Brikenshtein, Kh.-M. A. 2, 76

Edilashvili, I. L.: Photo-oxidative transformations and stabilization of mineral oils 3, 146
Erivanskaya, L. A. *See* Chetina, O. V., Erivanskaya, L. A. and Lunin, V. V. 1, 30

Filippenko, T. A. *See* Nikolayevskii, A. N,. Filippenko, T. A. and Sergovskaya, T. S. 2, 104
Filippenko, T. A. *See* Nikolayevskii, A. N., Filippenko, T. A., Sergovskaya, T. S. and Sharanina, L. G. 4, 206

Gagarin, S. G., Makar'yev, S. S. and Krichko, A. A.: Hydrogenation of cyclopentadiene to cyclopentene on an alumina–palladium–sulphide catalyst 4, 189
Gagarina, A. B. *See* Nekipelova, T. D. and Gagarina, A. B. 1, 56
Glebova, Ye. V., Vishnyakova, T. P., Lebedev, V. N. and Ragulin, L. I.: Synthesis and study of carbamide derivatives of the 2,6-di-tert-butylphenol type as antioxidants 1, 13
Grinberg, D. N., Yakovleva, N. V., Shapirov, A. L., Ivanova, M. L. and Moshkevich, A. S.: Effect of sulphur on catalytic properties of nickel activated with elements of groups I–VII of the periodic system in conversion of hydrocarbons with steam 2, 91
Gol'dfarb, E. I. *See* Grishina, O. N., Potekhina, M. I., Bashinova, V. M. and Gol'dfarb, E. I. 4, 219
Grishina, O. N., Potekhina, M. I., Bashinova, V. M. and Gol'dfarb, E. I.: Oxidative transformations of disulphides of phosphorus dithioacids in reactions with hydroperoxides 4, 219

Igiamova, N. A., Mazitova, F. N. and Brodskii, Ye. S.: Mass-spectrometric study of petroleum sulphones 2, 109
Isakov, M. Yu. *See* Belko, O. A., Isakov, M. Yu., Telly, V. Yu. and Lopatenko, S. K. 4, 212
Ivanov, A. M. and Chervinskii, K. A.: Selectivity of liquid-phase oxidation of benzaldehyde in deep conversion 1, 49
Ivanova, M. L. *See* Grinberg, D. N., Yakovleva, N. V., Shapirov, A. L., Ivanova, M. L. and Moshkevich, A. S. 2, 91
Ivolgin, V. Ya. *See* Zhukov, V. I., Belov, G. P., Ivolgin, V. Ya., Shestak, N. P., Kartasheva, N. V. and Yushina, G. Ya. 3, 150
Izmailov, R. I. *See* Sadykov, F. F. and Izmailov, R. I. 1, 1

Kapustin, V. M., Panchenkov, G. M. (dec.), Skoblo, V. A., Yushchenko, V. V. and Kozlov, L. L.: Acidity and catalytic activity of dysprosium forms of amorphous

alumina–silicate catalysts in craking of heavy gas oil 1, 36
Kartasheva, N. V. *See* Zhukov, V. L., Belov, G. P., Ivolgin, V. Ya., Shestak, N. P., Kartasheva, N. V. and Yushina, G. Ya. 3, 150
Kenigsberg, T. P. *See* Ariko, N. G., Kenigsberg, T. P. and Mitskevich, N. L. 3, 166
Kharenko, O. A. *See* Sandler, E. A., Kharenko, O. A., Ryabukhin, A. V. and Bobylev, B. N. 4, 199
Khcheyan, Kh. Ye., Klebanova, F. D., Bitman, G. L., Sobolev, O. B. and Sokolova, G. A.: Optimum conditions for oxidative methylation of toluene under pressure 2, 83
Klebanova, F. D. *See* Khcheyan, Kh. Ye., Klebanova, F. D., Bitman, G. L., Sobolev, O. B. and Sokolova, G. A. 2, 83
Korenevskaya, R. G., Kuz'mina, G. N., Markova, Ye. I. and Sanin, P. I.: Kinetic regularities of interaction of zinc dialkyldithiocarbamates with peroxide radicals and cumyl hydroperoxide 3, 127
Kovacheva, P. *See* Davidova, P. and Kovacheva, P. 1, 18
Kovtun, G. A., Zhukovskaya, G. B., Berenblyum, A. S. and Moiseyev, I. I.: Inhibiting properties of thio- and dithiophenates of transition metals in oxidation of pentaerythritol and monocarboxylic acid esters 3, 133
Kozlov, L. L. *See* Kapustin, V. M., Panchenkov, G. M. (dec.), Skoblo, V. A., Yushchenko, V. V. and Kozlov, L. L. 1, 36
Krichko, A. A. *See* Gagarin, S. G., Makar'yev, S. S. and Krichko, A. A. 4, 189
Kulikovskaya, T. N. *See* Znamenskaya, O. A., Viliyanskaya, G. D., Kulikovskaya, T. N. and Mutovkina, T. A. 3, 154
Kuliyev, F. A. *See* Aslanov, A. D., Zolotova, N. V., Denisov, Ye. T. and Kuliyev, F. A. 3, 137
Kuz'mina, G. N. *See* Korenevskaya, R. G., Kuz'mina, G. N., Markova, Ye. I. and Sanin, P. I. 3, 127

Lebedev, V. N. *See* Glebova, Ye. V., Vishnyakova, T. P., Lebedev, V. N. and Ragulin, L. I. 1, 13
Lipshtein, A. R. *See* Aratskova, A. A., Ageyev, A. N., Anpilogov, Yu. Ye., Alekseyeva, T. V., Lipshtein, A. R., Margulis, M. A. and Yashin, Ya. I. 2, 73
Litvinova, V. D. *See* Matkovskii, P. Ye., D'yachkovskii, F. S., Russiyan, L. N., Litvinova, V. D., Belova, V. N., Startseva, G. P. and Brikenshtein, Kh.-M. A. 2, 76
Lopatenko, S. K. *See* Beiko, O. A., Isakov, M. Yu., Telly, V. Yu. and Lopatenko, S. K. 4, 212
Lunin, V. V. *See* Chetina, O. V., Erivanskaya, L. A. and Lunin, V. V. 1, 30
Lyapina, N. K., Parnes, Z. N., Tolstikov, G. A., Parfenova, M. A. and Shmakov, V. S.: Ionic hydrogenation of thiophens of petroleum origin 3, 170

Makar'yev, S. S. *See* Gagarin, S. G., Makar'yev, S. S. and Krichko, A. A. 4, 189
Margulis, M. A. *See* Aratskova, A. A., Ageyev, A. N., Anpilogov, Yu. Ye., Alekseyeva, T. V., Lipshtein, A. R., Margulis, M. A. and Yashin, Ya. I. 2, 73
Markova, Ye. I. *See* Korenevskaya, R. G., Kuz'mina, G. N., Markova, Ye. I. and Sanin, P. I. 3, 127
Matkovskii, P. Ye., D'yachkovskii, F. S., Russiyan, L. N., Litvinova, V. D., Belova, V. N., Startseva, G. P. and Brikenshtein, Kh.-M. A. 2, 76
Mazitova, F. N. *See* Iglamova, N. A., Mazitova, F. N. and Brodskii, Ye. S. 2, 109
Meizus, Z. K. (dec.) *See* Arakelyan, E. A., Azatyan, N. A., Meskina, M. Ya. and Meizus, Z. K. (dec.) 3, 121
Meskina, M. Ya. *See* Arakelyan, E. A., Azatyan, N. A., Meskina, M. Ya. and Meizus, Z. K. (dec.) 3, 121

**Minachev, Kh. M.** *See* **Ryashentseva, M. A., Belanova, Ye. P. and Minachev, Kh. M.** 1, 42
**Minachev, Kh. M.** *See* **Ryashentseva, M. A., Minachev, Kh. M., Yunusov, M. P. and Serodzhev, A. T.** 2, 99
**Mitskevich, N. I.** *See* **Ariko, N. G., Kenigsberg, T. P. and Mitskevich, N. I.** 3, 166
**Moiseyev, I. I.** *See* **Kovtun, G. A., Zhukovskaya, G. B., Berenblyum, A. S. and Moiseyev, I. I.** 3, 133
**Moshkevich, A. S.** *See* **Grinberg, D. N., Yakovleva, N. V., Shapirov, A. L., Ivanova, M. L. and Moshkevich, A. S.** 2, 91
**Mutovkina, T. A.** *See* **Znamenskaya, O. A., Viliyanskaya, G. D., Kulikovskaya, T. N. and Mutovkina, T. A.** 3, 154

**Nekipelova, T. D. and Gagarina, A. B.:** Selective action of antioxidants in oxidation of organic compounds 1, 56
**Nikolayevskii, A. N., Filippenko, T. A. and Sergovskaya, T. S.:** Intensification of chemiluminescence in the inhibited oxidation of oils 2, 104
**Nikolayevskii, A. N., Filippenko, T. A., Sergovskaya, T. S. and Sharanina, L. G.:** Liquid-phase oxidation of ethylbenzene in the presence of a thiazole derivative 4, 206

**Panchenkov, G. M.** (dec.) *See* **Kapustin, V. M., Panchenkov, G. M.** (dec.), **Skoblo, V. A., Yushchenko, V. V. and Kozlov, L. L.** 1, 36
**Parfenova, M. A.** *See* **Lyapina, N. K., Parnes, Z. N., Tolstikov, G. A., Parfenova, M. A. and Shmakov, V. S.** 3, 170
**Parnes, Z. N.** *See* **Lyapina, N. K., Parnes, Z. N., Tolstikov, G. A., Parfenova, M. A. and Shmakov, V. S.** 3, 170
**Plevako, L. V.** *See* **Yegiazarov, Yu. G., Cherches, B. Kh. and Plevako, L. V.** 1, 6
**Plyusnin, A. N.** *See* **Bembel', V. M., Plyusnin, A. N. and Brodskii, Ye. S.** 1, 23
**Pokrovskaya, I. Ye.** *See* **Romanova, I. B. and Pokrovskaya, I. Ye.** 3, 159
**Potekhina, M. I.** *See* **Grishina, O. N., Potekhina, M. I., Bashinova, V. M. and Gol'dfarb, E. I.** 4, 219

**Ragulin, L. I.** *See* **Glebova, Ye. V., Vishnyakova, T. P., Lebedev, V. N. and Ragulin, L. I.** 1, 13
**Romanova, I. B. and Pokrovskaya, I. Ye.:** Preparation of *p*-isopropylphenol by selective oxidation of *p*-di-isopropylbenzene 3, 159
**Russiyan, L. N.** *See* **Matkovskii, P. Ye., D'yachkovskii, F. S., Russiyan, L. N., Litvinova, V. D., Belova, V. N., Startseva, G. P. and Brikenshtein, Kh.-M. A.** 2, 76
**Ryabukhin, A. V.** *See* **Sandler, E. A., Kharenko, O. A., Ryabukhin, A. V. and Bobylev, B. N.** 4, 199
**Ryashentseva, M. A., Belanova, Ye. P. and Minachev, Kh. M.:** Interaction of $C_6$ hydrocarbons with hydrogen sulphide on a catalyst containing chromium 1, 42
**Ryashentseva, M. A., Minachev, Kh. M., Yunusov, M. P. and Serodzhev, A. T.:** Alumino-rhenium-sulphide catalysts in hydrogenation of carboxylic acids 2, 99

**Sadykov, F. F. and Izmailov, R. I.:** Dehydrogenation of cyclohexane and isoamylenes on nickel and calcium–nickel phosphate catalysts 1, 1
**Sandler, E. A., Kharenko, O. A., Ryabukhin, A. V. and Bobylev, B. N.:** Kinetics of liquid-phase oxidation of propionaldehyde with oxygen 4, 199
**Sanin, P. I.** *See* **Korenevskaya, R. G., Kuz'mina, G. N., Markova, Ye. I. and Sanin, P. I.** 3, 127
**Sergovskaya, T. S.** *See* **Nikolayevskii, A. N., Filippenko, T. A. and Sergovskaya, T. S.** 2, 104

Sergovskaya, T. S. *See* Nikolayevskaya, A. N., Filippenko, T. A., Sergovskaya, T. S. and Sharanina, L. G. 4, 206
Serodzhev, A. T. *See* Ryashentseva, M. A., Minachev, Kh. M., Yunusov, M. P. and Serodzhev, A. T. 2, 99
Shapirov, A. L. *See* Grinberg, D. N., Yakovleva, N. V., Shapirov, A. L., Ivanova, M. L. and Moshkevich, A. S. 2, 91
Sharanina, L. G. *See* Nikolayevskii, A. N., Filippenko, T. A., Sergovskaya, T. S. and Sharanina, L. G. 4, 206
Shmakov, V. S. *See* Lyapina, N. K., Parnes, Z. N., Tolstikov, G. A., Parfenova, M. A. and Shmakov, V. S. 3, 170
Skoblo, V. A. *See* Kapustin, V. M., Panchenkov, G. M. (dec.), Skoblo, V. A., Yushchenko, V. V. and Kozlov, L. L. 1, 36
Smirnova, A. L., Tavadyan, L. A. and Blyumberg, E. A.: Inhibiting action of metal selenides in the oxidation of cyclohexane 3, 143
Sobolev, O. B. *See* Khcheyan, Kh. Ye., Klebanova, F. D., Bitman, G. L., Sobolev, O. B. and Sokolova, G. A. 2, 83
Sokolova, G. A. *See* Khcheyan, Kh. Ye., Klebanova, F. D., Bitman, G. L., Sobolev, O. B. and Sokolova, G. A. 2, 83
Startseva, G. P. *See* Matkovskii, P. Ye., D'yachkovskii, F. S., Russiyan, L. N., Litvinova, V. D., Belova, V. N., Startseva, G. P. and Brikenshtein, Kh.-M. A. 2, 76

Tavadyan, L. A. *See* Smirnova, A. L., Tavadyan, L. A. and Blyumberg, E. A. 3, 143
Telly, V. Yu. *See* Beiko, O. A., Isakov, M. Yu., Telly, V. Yu. and Lopatenko, S. K. 4, 212
Tolstikov, G. A. *See* Lyapina, N. K., Parnes, Z. N., Tolstikov, G. A., Parfenova, M. A. and Shmakov, V. S. 3, 170

Viliyanskaya, G. D. *See* Znamenskaya, O. A., Viliyanskaya, G. D., Kulikovskaya, T. N. and Mutovkina, T. A. 3, 154
Vishnyakova, T. P. *See* Glebova, Ye. V., Vishnyakova, T. P., Lebedev, V. N. and Ragulin, L. I. 1, 13

Yakovleva, N. V. *See* Grinberg, D. N., Yakovleva, N. V., Shapirov, A. L., Ivanova, M. L. and Moshkevich, A. S. 2, 91
Yashin, Ya. I. *See* Aratskova, A. A., Agayev, A. N., Anpilogov, Yu. Ye., Alekseyeva, T. V., Lipshtein, A. R., Margulis, M. A. and Yashin, Ya. I. 2, 73
Yegiazarov, Yu. G., Cherches, B. Kh. and Plevako, L. V.: Pyrolysis of gasoline cuts in the presence of indium oxide catalysts 1, 6
Yunusov, M. P. *See* Ryashentseva, M. A., Minachev, Kh. M., Yunusov, M. P. and Serodzhev, A. T. 2, 99
Yushchenko, V. V. *See* Kapustin, V. M., Panchenkov, G. M. (dec.), Skoblo, V. A., Yushchenko, V. V. and Kozlov, L. L. 1, 36
Yushina, G. Ya. *See* Zhukov, V. I., Belov, G. P., Ivolgin, V. Ya., Shestak, N. P., Kartasheva, N. V. and Yushina, G. Ya. 3, 150

Zhukov, V. I., Belov, G. P., Ivolgin, V. Ya. and Shestak, G. Ya.: Optimum conditions of dimerization of ethylene on a $Ti(OR)_4$–$AlR_3$ catalyst 3, 150
Zhukovskaya, G. B. *See* Kovtun, G. A., Zhukovskaya, G. B., Berenblyum, A. S. and Moiseyev, I. I. 3, 133

**Znamenskaya, O. A., Viliyanskaya, G. D., Kulikovskaya, T. N. and Mutovkina, T. A.:** Special features of the action of inhibitors in liquid-phase oxidation of hydrocarbons 3, 154
**Zolotova, N. V.** *See* **Aslanov, A. D., Zolotova, N. V., Denisov, Ye. T. and Kuliyev, F. A.** 3, 137

# SUBJECT INDEX


**Acidity** and catalytic activity of dysprosium forms of amorphous alumina–silicate catalysts in cracking of heavy gas oil 1, 36
**Activity** of cobalt, manganese and ruthenium salts in liquid-phase oxidation of *p*-xylene 3, 166
**Alkylnaphthalenes,** analysis of higher – by liquid chromatography 2, 73
**Allyl alcohol,** direct synthesis of glycerol ethers by oxidation of – and its esters with atmospheric oxygen 4, 208
**Antioxidants,** selective action of – in oxidation of organic compounds 1, 56

**Benzaldehyde,** selectivity of liquid-phase oxidation of – in deep conversion 1, 49

**Carbamide derivatives,** synthesis and study of – of the 2,6-di-tert-butylphenol type as antioxidants 1, 13
**Carboxylic acids,** alumino-rhenium-sulphide catalysts in hydrogenation of – 2, 99
**Catalyst,** hydrogenation of cyclopentadiene to cyclopentene on an alumina–palladium–sulphide – 4, 189
**Catalyst,** interaction of $C_6$ hydrocarbons with hydrogen sulphide on a – containing chromium 1, 42
**Catalyst,** optimum conditions of dimerization of ethylene on a $Ti(OR)_4$–$AlR_3$ – 3, 150
**Catalysts,** acidity and catalytic activity of dysprosium forms of amorphous alumina–silicate – in cracking of heavy gas oil 1, 36
**Catalysts,** alumino-rhenium-sulphide – in hydrogenation of carboxylic acids 2, 99
**Catalysts,** dehydrogenation of cyclohexane and isoamylenes on nickel and calcium–nickel phosphate – 1, 1
**Catalysts,** pyrolysis of gasoline cuts in the presence of indium oxide – 1, 6
**Catalysts,** special features of thiophen conversion on zeolite – containing transition metals 1, 18
**Catalytic activity,** acidity and – of dysprosium forms of amorphous alumina–silicate catalysts in cracking of heavy gas oil 1, 36
**Catalytic properties,** effect of sulphur on – of nickel activated with elements of groups I–VII of the periodic system in conversion of hydrocarbons with steam 2, 91
**Chemiluminescence,** intensification of – in the inhibited oxidation of oils 2, 104
**Cobalt,** activity of – , manganese and ruthenium salts in liquid-phase oxidation of *p*-xylene 3, 166
**Conversion,** effect of sulphur on catalytic properties of nickel activated with elements of groups I–VII of the periodic system in – of hydrocarbons with steam 2, 91
**Conversion,** selectivity of liquid-phase oxidation of benzaldehyde in deep – 1, 49
**Conversion,** special features of thiophen – on zeolite catalysts containing transition metals 1, 18
**Copper,** effect of – on the selectivity of a Zr–Ni–Cu–H system in hydromethylation of toluene 1, 30
**Cumyl hydroperoxide,** kinetic regularities of interaction of zinc dialkyldithiocarbamates with peroxide radicals and – 3, 127

**Cyclohexane,** dehydrogenation of – and isoamylenes on nickel and calcium–nickel phosphate catalysts 1, 1
**Cyclohexane,** inhibiting action of metal selenides in the oxidation of – 3, 143
**Cyclopentadiene,** hydrogenation of – to cyclopentene on an alumina–palladium–sulphide catalyst 4, 189
**Cyclopentane,** hydrogenation of cyclopentadiene to – on an alumina–palladium–sulphide catalyst 4, 189

**Dehydrogenation** of cyclohexane and isoamylenes on nickel and calcium–nickel phosphate catalysts 1, 1
***p*-Di-isopropylbenzene,** preparation of *p*-isopropylphenol by selective oxidation of – 3, 159
**Diethyl ether,** dimerization of ethylene using a $Ti(n\text{-}C_4Z_9O)_4$–$Al(C_2H_5)_3$ system in – in the presence of hydrogen 2, 76
**Dimerization** of ethylene using a $Ti(n\text{-}C_4Z_9O)_4$–$Al(C_2H_5)_3$ system in diethyl ether in the presence of hydrogen 2, 76
**Dimerization,** optimum conditions of – of ethylene on a $Ti(OR)_4$–$AlR_3$ catalyst 3, 150
**Distillates,** composition of nitrogen compounds separated from – of West Siberian oils using $TiCl_4$ 1, 23
**Disulphides,** kinetics of interaction of hydroperoxides with some – 3, 137
**2,6-Di-tert-butylphenol,** synthesis and study of carbamide derivatives of the – type as antioxidants 1, 13
**Dysprosium forms,** acidity and catalytic activity of – of amorphous alumina–silicate catalysts in cracking of heavy gas oil 1, 36

**Esters,** direct synthesis of glycerol ethers by oxidation of allyl alcohol and its – with atmospheric oxygen 4, 208
**Esters,** inhibiting properties of thio- and dithiophenates of transition metals in oxidation of pentaerythritol and monocarboxylic acid – 3, 133
**Ethylbenzene,** liquid-phase oxidation of – in the presence of a thiazole derivative 4, 206
**Ethylene,** dimerization of – using a $Ti(n\text{-}C_4H_9O)_4$–$Al(C_2H_5)_3$ system in diethyl ether in the presence of hydrogen 2, 76
**Ethylene,** optimum conditions of dimerization of – on a $Ti(OR)_4$–$AlR_3$ catalyst 3, 150

**Gasoline,** pyrolysis of – cuts in the presence of indium oxide catalysts 1, 6
**Glycerol ethers,** direct synthesis of – by oxidation of allyl alcohol and its esters with atmospheric oxygen 4, 208

**Hydrocarbons,** effect of sulphur on catalytic properties of nickel activated with elements of groups I–VII of the periodic system in conversion of – with steam 2, 91
**Hydrocarbons,** inhibition of oxidation of – with phenol mixtures of equal inhibiting effect 3, 121
**Hydrocarbons,** interaction of $C_6$ – with hydrogen sulphide on a catalyst containing chromium 1, 42
**Hydrocarbons,** special features of the action of inhibitors in liquid-phase oxidation of – 3, 154
**Hydrodemethylation,** effect of copper on the selectivity of a Zr–Ni–Cu–H system in – of toluene 1, 30
**Hydrogen,** dimerization of ethylene using a $Ti(n\text{-}C_4H_9O)_4$–$Al(C_2H_5)_3$ system in diethyl ether in the presence of – 2, 76
**Hydrogen sulphide,** interaction of $C_6$ hydrocarbons with – on a catalyst containing chromium 1, 42

**Hydrogenation** of cyclopentadiene to cyclopentene on an alumina–palladium–sulphide catalyst 4, 189
**Hydrogenation,** alumino-rhenium-sulphide catalysts in – of carboxylic acids 2, 99
**Hydrogenation,** ionic – of thiophens of petroleum origin 3, 170
**Hydroperoxides,** kinetics of interaction of – with some disulphides 3, 137
**Hydroperoxides,** oxidative transformations of disulphides of phosphorus dithio-acids in reactions with – 4, 219

**Inhibiting action** of metal selenides in the oxidation of cyclohexane 3, 143
**Inhibiting properties** of thio- and dithiophenates of transition metals in oxidation of pentaerythritol and monocarboxylic acid esters 3, 133
**Inhibition of oxidation** of hydrocarbons with phenol mixtures of equal inhibiting effect 3, 121
**Inhibitors,** special features of the action of – in liquid-phase oxidation of hydrocarbons 3, 154
**Isoamylenes,** dehydrogenation of cyclohexane and – on nickel and calcium–nickel phosphate catalysts 1, 1
***p*-Isopropylphenol,** proparation of – by selective oxidation of *p*-di-isopropylbenzene 3, 159

**Kinetic regularities** of interaction of zinc dialkyldithiocarbamates with perixide radicals and cumyl hydroperoxide 3, 127
**Kinetics** of interaction of hydroperoxides with some disulphides 3, 137
**Kinetics** of liquid-phase oxidation of propionaldehyde with oxygen 4, 199

**Liquid chromatography,** analysis of higher alkylnaphthalenes by – 2, 73
**Liquid-phase oxidation,** activity of cobalt, manganese and ruthenium salts in – of *p*-xylene 3, 166
**Liquid-phase oxidation,** kinetics of – of propionaldehyde with oxygen 4, 199
**Liquid-phase oxidation** of ethylbenzene in the presence of a thiazole derivative 4, 206
**Liquid-phase oxidation** of low-molecular weight olefins 4, 203
**Liquid-phase oxidation,** special features of the action of inhibitors in – of hydrocarbons 3, 154

**Manganese,** activity of cobalt, – and ruthenium salts in liquid-phase oxidation of *p*-xylene 3, 166
**Mass-spectrometric study** of petroleum sulphones 2, 109
**Metal selenides,** inhibiting action of – in the oxidation of cyclohexane 3, 143

**Nickel,** dehydrogenation of cyclohexane and isoamylenes on – and calcium–nickel phosphate catalysts 1, 1
**Nickel,** effect of sulphur on catalytic properties of – activated with elements of groups I–VII of the periodic system in conversion of hydrocarbons with steam 2, 91
**Nitrogen,** composition of – bases of Dzharkurgan crude oil (South Uzbekistan) 4, 212
**Nitrogen compounds,** composition of – separated from distillates of West Siberian oils using $TiCl_4$ 1, 23

**Oil,** acidity and catalytic activity of dysprosium forms of amorphous alumina–silicate catalysts in cracking of heavy gas – 1, 36

**Oil, composition of nitrogen bases of Dzharkurgan crude – (South Uzbekistan)** 4, 212
**Oils, photo-oxidative transformations and stabilization of mineral –** 3, 146
**Olefins,** liquid-phase oxidation of low-molecular weight – 4, 203
**Oxidation of allyl alcohol,** direct synthesis of glycerol ethers by – and its esters with atmospheric oxygen 4, 208
**Oxidation of benzaldehyde,** selectivity of liquid-phase – in deep conversion 1, 49
**Oxidation of cyclohexene,** inhibiting action of metal selenides in the – 3, 143
**Oxidation of *p*-di-isopropylbenzene,** preparation of *p*-isopropylphenol by selective – 3, 159
**Oxidation of ethylbenzene,** liquid-phase – in the presence of a thiazole derivative 4, 206
**Oxidation of hydrocarbons,** inhibition of – with phenol mixtures of equal inhibiting effect 3, 121
**Oxidation of hydrocarbons,** special features of the action of inhibitors in liquid-phase – 3, 154
**Oxidation of low-molecular weight olefins,** liquid-phase – 4, 203
**Oxidation of oils,** intensification of chemiluminescence in the inhibited – 2, 104
**Oxidation of organic compounds,** selective action of antioxidants in – 1, 56
**Oxidation of pentaerythritol,** inhibiting properties of thio- and dithiophenates of transition metals in – and monocarboxylic acid esters 3, 133
**Oxidation of propionaldehyde,** kinetics of liquid-phase – with oxygen 4, 199
**Oxidation of *p*-xylene,** activity of cobalt, manganese and ruthenium salts in liquid-phase – 3, 166
**Oxidative methylation,** optimum conditions for – of toluene under pressure 2, 83
**Oxidative transformations** of disulphides of phosphorus dithioacids in reactions with hydroperoxides 4, 219
**Oxygen,** direct synthesis of glycerol ethers by oxidation of allyl alcohol and its esters with atmospheric – 4, 208
**Oxygen,** kinetics of liquid-phase oxidation of propionaldehyde with – 4, 199

**Pentaerythritol,** inhibiting properties of thio- and dithiophenates of transition metals in oxidation of – and monocarboxylic acid esters 3, 133
**Peroxide radicals,** kinetic regularities of interaction of zinc dialkyldithiocarbamates with – and cumyl hydroperoxide 3, 127
**Petroleum sulphones,** mass-spectrometric study of – 2, 109
**Phenol mixtures,** inhibition of oxidation of hydrocarbons with – of equal inhibiting effect 3, 121
**Phosphorus dithioacids,** oxidative transformations of disulphides of – in reactions with hydroperoxides 4, 219
**Photo-oxidative transformations** and stabilization of mineral oils 3, 146
**Propionaldehyde,** kinetics of liquid-phase oxidation of – with oxygen 4, 199
**Pyrolysis** of gasoline cuts in the presence of indium oxide catalysts 1, 6

**Ruthenium salts,** activity of cobalt, manganese and – in liquid-phase oxidation of *p*-xylene 3, 166

**Selective action** of antioxidants in oxidation of organic compounds 1, 56
**Selectivity of a Zr–Ni–Cu–H system,** effect of copper on the – in hydrodemethylation of toluene 1, 30
**Selectivity of liquid-phase oxidation** of benzaldehyde in deep conversion 1, 49
**Stabilization of mineral oils,** photo-oxidative transformations and – 3, 146
**Sulphur,** effect of – on catalytic properties of nickel activated with elements of groups I–VII of the periodic system in conversion of hydrocarbons with steam 2, 91

**Synthesis** and study of carbamide derivatives of the 2,6-di-tert-butylphenol type as antioxidants 1, 13
**Synthesis of glycerol ethers,** direct – by oxidation of allyl alcohol and its esters with atmospheric oxygen 4, 208

**Thiazole derivative,** liquid-phase oxidation of ethylbenzene in the presence of a – 4, 206
**Thio- and dithiophenates of transition metals,** inhibiting properties of – in oxidation of pentaerythritol and monocarboxylic acid esters 3, 133
**Thiophen conversion,** special features of – on zeolite catalysts containing transition metals 1, 18
**Thiophens of petroleum origin,** ionic hydrogenation of – 3, 170
**Toluene,** effect of copper on the selectivity of a Zr–Ni–Cu–H system in hydrodemethylation of – 1, 30
**Toluene,** optimum conditions for oxidative methylation of – under pressure 2, 83

***p*-Xylene,** activity of cobalt, manganese and ruthenium salts in liquid-phase oxidation of – 3, 166

**Zinc dialkyldithiocarbamates,** kinetic regularities of interaction of – with peroxide radicals and cumyl hydroperoxide 3, 127
**Zr–Ni–Cu–H system,** effect of copper on the selectivity of a – in hydromethylation of toluene 1, 30